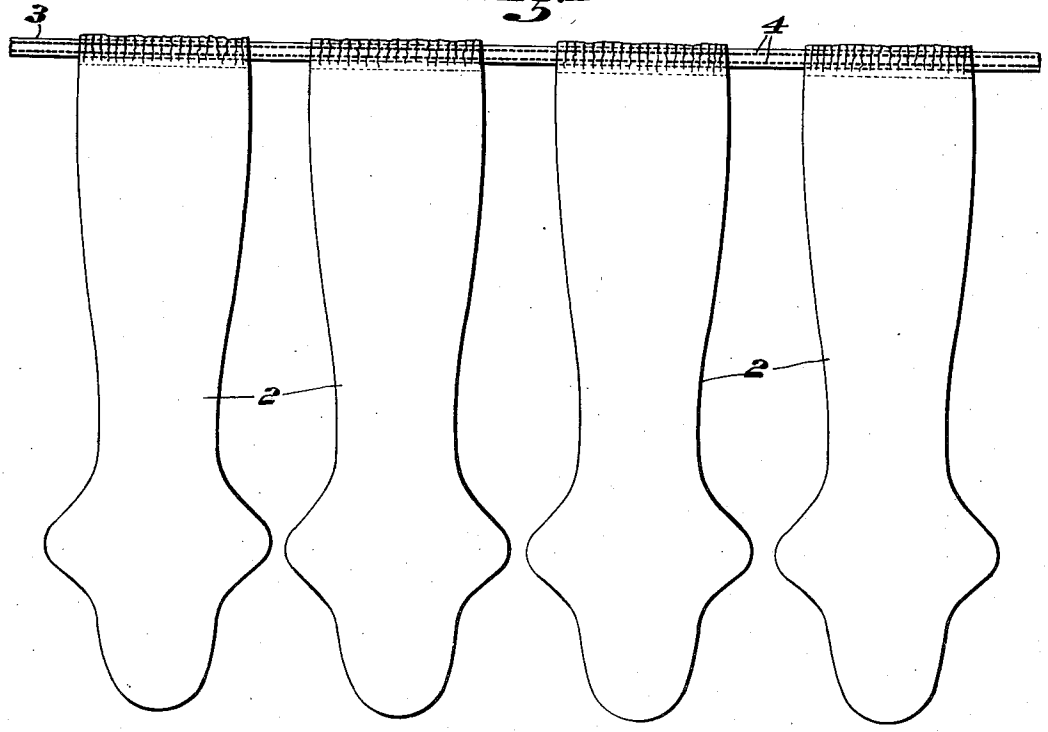
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METHOD OF MAKING HOSIERY

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Fig. 1



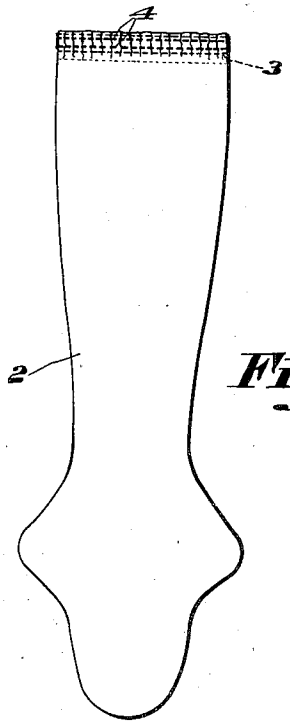


Fig 2

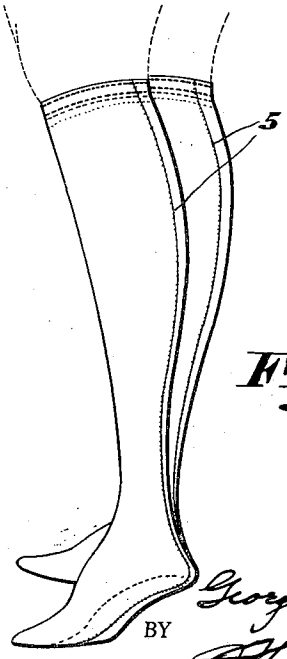


Fig. 3

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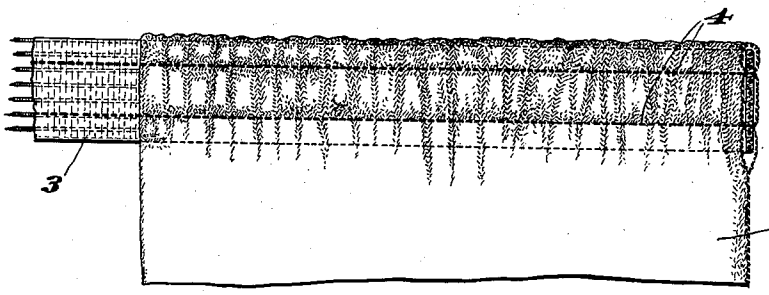


Fig. 4

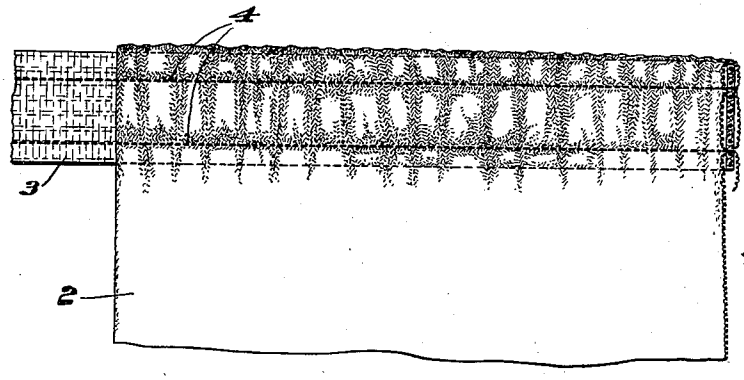
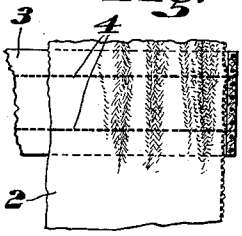


Fig. 5

Fig. 8



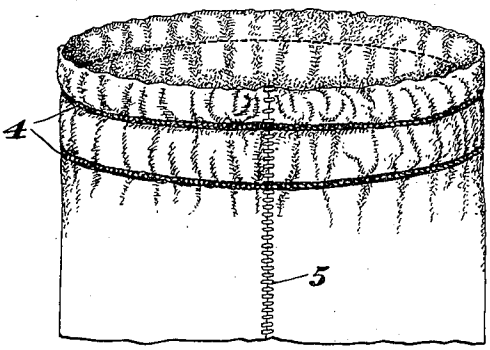


Fig. 7

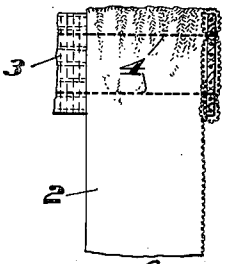


Fig. 6

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UNITED STATES PATENT OFFICE

2,066,282

METHOD OF MAKING HOSIERY

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Application April 19, 1935, Serial No. 17,281

5 Claims. (Cl. 2—240)

This invention relates to hosiery and is more especially, but not exclusively, concerned with women's hosiery.

It has been proposed heretofore to provide certain types of women's stockings with a garter top made of elastic webbing. The present invention aims to improve hosiery of this general type with a view to providing a thoroughly satisfactory product, while at the same time effecting economies in the process of manufacture. The invention involves both a novel article and also a new method.

The nature of the invention will be readily understood from the following description when read in connection with the accompanying drawings, and the novel features will be particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a plan view illustrating steps in the method of making full-fashioned hosiery in accordance with the present invention;

Fig. 2 is a similar view illustrating an additional step in the process;

Fig. 3 is a perspective view showing a completed stocking;

Figs. 4, 5 and 6 are plan views on a larger scale illustrating different stocking constructions embodying features of this invention;

Fig. 7 is a perspective view of the top of a stocking showing the manner in which the stocking is closed at the back of the leg; and

Fig. 8 is a view similar to Fig. 6 illustrating another embodiment of the invention.

Referring first to Figs. 1, 2 and 3, a series of stocking webs immediately after coming off the knitting machine are indicated at 2 in Fig. 1. At this time the stockings are "in the flat" and in the form of webs. Each stocking has a welt or hem at its top which has been made by knitting a length of fabric, folding it over, placing the extreme edge on the needles, and resuming the knitting operation. According to the present invention a strip 3 of elastic webbing, which may be either woven, braided, or knit, and which has rubber threads extending lengthwise of the web, is run through the hems of these stocking webs, thus stringing them together. They may be spaced apart by slight distances sufficient for the convenience of the operator. This elastic strip is then sewed to the stocking tops by one or more lines of stitches, two preferably being used as indicated at 4—4, the seams running lengthwise of the strip. Due to the fact that the seams are straight and that a series of stocking webs are strung together in this manner, the stitching operation may be performed very rapidly. A double needle machine may be used for this purpose. The seams should be of a type capable of stretching with the stocking fabric or both the fabric and the elastic web may be stretched slightly during this stitching operation to give the slack required for this purpose. In any event, when this stitching operation has been completed, the entire series of stocking webs will be connected together, and the lines of stitching will run continuously from one end of the strip to the other, or at least through the entire lengths of the elastic webs which lie inside the hems. The stocking webs then are cut apart by severing the elastic strip 3, the cutting preferably being done substantially flush with the vertical edges of the stocking webs. At this time an individual stocking web appears as shown in Fig. 2.

From this point on, no change whatever in the ordinary method of manufacture is required. It should be noted, however, that the lines of stitching 4—4 prevent the webbing 3 from ravelling during the subsequent handling of the stockings. In a typical process the stocking webs next go to the seaming machine which puts in the back seam 5, Figs. 3 and 7, thus closing the stocking, and later they are dyed, laundered and pressed. Due to the fact that the ends of the strip 3 are cut off flush with the edges of the fabric, these ends are abutted together in connection with the back seaming operation and are secured in this relationship by the stitches of the back seam 5.

In this arrangement the elastic webbing is completely enclosed in the stocking fabric, as will be evident from an inspection of Figs. 4 and 7, so that the presence of this elastic strip does not detract from the appearance of the stocking. If the elastic web is held in a stretched condition during the stitching operation, it will tend to gather or pucker the top of the stocking slightly, giving this part of the fabric a shirred effect, as shown in Figs. 4, 5 and 7. In some stockings this is desirable, but in other cases it is not necessary and the elastic web is run in in a substantially unstretched condition. Since the rubber threads in the elastic web are under some initial tension, and that tension can be predetermined and made to suit the requirements of individual situations, the snap-back and elasticity of the web may be made entirely independent of any effect produced by the preliminary stretching during stitching. The initial stretching of both the stocking fabric and the elastic web is

often utilized, however, to introduce additional slack into the stitches of the seams 4—4 so that ample leeway or degree of stretch of both the fabric and the web is afforded before such stretching reaches the limit fixed by the seams. These lines of stitching definitely maintain the webbing and the stocking in a fixed relationship to each other at all times.

In those stockings, whether full-fashioned or not, which are not provided with a hem, the web 3 may be secured to the top of the stocking by folding over the margin and stitching the web to the stocking in the manner above described. Such a construction is illustrated in Fig. 5. If, in addition, the lower free edge of the turned-over portion of the stocking is folded under the web 3 so that it will be secured to the main portion of the leg by the lower line 4 of stitching, as shown in Fig. 6, such a stocking can be made to imitate the usual hemmed construction more closely. From a functional standpoint, however, it is not essential to have the web 3 enclosed in the stocking fabric, and it may simply be stitched to one side of the stocking near the upper edge thereof, as shown in Fig. 8, where it functions in the same manner as those constructions illustrated in the other figures. This arrangement has the advantage of being somewhat less expensive in labor and it is useful in facilitating the production of special or "novelty" color effects where the color scheme of the webbing itself may form a part of the design of the top of the stocking. Usually, however, the arrangement illustrated in Figs. 1 to 4 is preferred.

It will be observed that in all of these constructions the lines of stitching are so spaced apart that they bind the transverse threads of the elastic webbing and prevent this web from ravelling. In other words, the picks of filling, if the web is of the woven type, are all sewed in by these longitudinal lines of stitching.

It may also be pointed out that inasmuch as the elastic web is stitched to the stocking top substantially throughout the length of the web, it is not necessary to have this web run entirely around the stocking and to have its ends joined together at the back seam. In other words, the web is anchored securely to the stocking by the lines of stitching, and the abutting of the ends and securing them together, while preferable, is not absolutely necessary.

The invention thus provides a method of making a stocking with a garter top which is very inexpensive, avoids any bunching of the garter which would be produced if the ends were overlapped and sewed together, and in which the possibility of ravelling of the webbing is definitely prevented.

Having thus described my invention, what I desire to claim as new is:

1. That improvement in methods of making full-fashioned hosiery, which consists in running a strip of elastic webbing through the hems at the tops of a series of stocking webs while said stocking webs are in a flat condition, stitching said strip to each stocking web by a seam running lengthwise of the strip, cutting the strip close to the vertical edges of the fabric of each stocking web, and seaming the stocking webs up the backs of the legs thereof.

2. That improvement in methods of making full-fashioned hosiery, which consists in stitching a strip of elastic webbing circumferentially to the top of a stocking web while in a flat condition, with the stitching running lengthwise of said strip and so spaced from the edges of said strip as to bind the transverse threads of the elastic web and secure them against ravelling, cutting said strip approximately flush with the vertical edges of said web, and subsequently seaming the stocking web up the back of the leg and thereby also uniting the ends of said strip.

3. That improvement in methods of making full-fashioned hosiery, which consists in running a strip of elastic webbing into the hem at the top of a stocking web with the strip extending through at least the greater part of the length of the hem, stitching longitudinally through said strip and the stocking web to secure the two together, spacing said stitching from the edges of the strip sufficiently to prevent the ends of the strip from ravelling, cutting said strip approximately flush with the vertical edges of said web and subsequently seaming the stocking web at the back of the leg and thereby closing said hem and uniting the ends of said strip.

4. That improvement in methods of making full-fashioned hosiery, which consists in stitching a strip of elastic webbing to the tops of a series of stocking webs while in a flat condition, with said strip extending parallel to the edges of the tops of the stocking webs and thereby connecting the stocking webs together in a string, cutting said strip close to the vertical edges of each web, and subsequently seaming the stocking webs at the backs of the legs thereof to close them.

5. That improvement in methods of making full-fashioned hosiery, which consists in stitching a strip of elastic webbing to the tops of a series of stocking webs while in a flat condition, with said strip extending parallel to the edges of the tops of the stocking webs and thereby connecting the stocking webs together in a string, cutting said strip between webs and thereby separating them, and subsequently seaming the stocking webs up the back of the legs thereof to close them.

GEORGE S. VAN VOORHIS.